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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/994,785

11/28/2001

Byoung-ho Choi

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06/14/2004

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EXAMINER

AGUSTIN, PETER VINCENT

ART UNIT

PAPER NUMBER

2652

8

DATE MAILED: 06/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/994,785

Applicant(s)

CHOI ET AL.

Examiner

Peter Vincent Agustin

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 2,3,9,10,15-32 and 34-42 is/are withdrawn from consideration.
- 5) ☒ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,4-8,11-14 and 33 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of species A in Paper No. 7 is acknowledged. The traversal is on the ground(s) that some of the species are closely related. This is not found persuasive because the different species are not indicated as being obvious variants and several claims are readable on each non-elected species, posing a serious burden on the examiner.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 9, 10, 15-32, 34 & 35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 7.

Furthermore, claims 2, 3 & 36-42 are withdrawn from further consideration because these claims contain subject matter which do not read on the elected species A, e.g.,

Claim 2: "second header information which is phase-modulated"

Claim 3: "third header information which is amplitude-modulated"

Claim 36, line 12: "duty signal generator"

Claim 38, line 13: "generating duty signals"

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2652

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4-8, 11-14 & 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi (US 6,097,695).

In regard to claim 1, Kobayashi discloses an optical recording medium (figure 5) comprising: a wobbled track on which user data is recorded, wherein a wobble signal (column 5, line 5) recorded on the wobbled track is a single-frequency signal (column 5, lines 8-9) having edge-modulated (column 10, lines 28-31) first header information.

In regard to claim 4, Kobayashi discloses that the first header information contains addressing information (column 4, lines 39-41).

In regard to claim 5, Kobayashi discloses an apparatus (figure 1) recording a wobble signal on an optical recording medium (figure 5), the apparatus comprising: a wobble signal generator (figure 1, elements 6 & 7) generating a single-frequency wobble signal (WB; column 5, lines 5-9) having header information which is edge-modulated (column 10, lines 28-31) based on first and second carrier signals having a same frequency and different edge waveforms (column 5, lines 46-54); and a recording unit (figure 1, element 5) recording the wobble signal generated by the wobble signal generator on the optical recording medium.

In regard to claim 6, Kobayashi discloses that the wobble signal generator (figure 1, elements 6 & 7) comprises: a clock generator (7B) generating a clock signal (column 5, lines 12-14); a carrier signal generator (7E) generating the first and second carrier signals based on the clock signal (column 5, lines 46-52); and an edge-modulator that receives header information and edge-modulates the header information using the first and second carrier signals output from

the carrier signal generator based on the clock signal (column 15, lines 19-26; column 10, lines 28-31).

In regard to claim 7, Kobayashi discloses that the edge-modulator transforms high and low levels of digital data (figures 3A-3F & 4A-4C) representing the header information into the first and second carrier signals, respectively, to modulate the digital data into an analog signal.

In regard to claim 8, Kobayashi discloses that the header information contains addressing information (column 4, lines 39-41).

In regard to claim 11, Kobayashi discloses a method of recording a wobble signal on an optical recording medium (figure 5), the method comprising the operations of: generating first and second carrier signals (column 5, lines 46-54) having a same frequency and different edge waveforms; generating a single-frequency wobble signal (figure 1, elements 6 & 7) having header information which is edge-modulated (column 10, lines 28-31) using the generated first and second carrier signals; and recording the generated single-frequency wobble signal on the optical recording medium (figure 1, element 5).

In regard to claim 12, Kobayashi discloses generating a clock signal (column 5, lines 12-14); and edge-modulating header information using the first and second carrier signals in accordance with the generated clock signal (column 15, lines 19-26; column 10, lines 28-31).

In regard to claim 13, Kobayashi discloses transforming high and low levels of digital data representing header information into the first and second carrier signals, respectively, to modulate the digital data into an analog signal (figures 3A-3F & 4A-4C).

In regard to claim 14, Kobayashi discloses that the header information contains addressing information (column 4, lines 39-41).

In regard to claim 33, Kobayashi discloses that the second carrier signal is a sine wave (see figures 3F & 4C).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Towner et al. (US 6,046,969) discloses an optical recording medium having width-modulated information.

Fairchild et al. (US 5,508,985) discloses a method for detecting and processing synchronization marks extracted from a prerecorded wobbled groove formed in a compact disk.

Maeda et al. (US 5,870,375) discloses a disk-shaped recording medium with a groove section having a wobbling side wall.

Van Den Enden et al. (US 6,181,658) discloses in figure 2 patterns of information bits and channel bits and track modulation curves.


Kawase et al. (US 6,611,486) discloses a recording medium recognition information recording method, wherein the "1" bits are modulated to a signal having a first frequency and the "0" bits are modulated to a signal having a second frequency.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Vincent Agustin whose telephone number is (703) 305-8980. The examiner can normally be reached on Monday thru Friday 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PVA
06/08/2004



W. R. YOUNG
PRIMARY EXAMINER